
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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COBALT IN DECEMBER 1997

According to preliminary data from the U.S. Geological Survey, U.S. consumption of cobalt in 1997 was 8% higher than consumption during 1996. U.S. imports of cobalt metal and cobalt contained in chemicals during January through November 1997 were 22% higher than imports during the first 11 months of 1996. Exports of unwrought cobalt and cobalt contained in chemicals during January through November 1997 were basically the same as exports during the same period in 1996. Trade data for December 1997 will be available in a subsequent issue.

Note

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

Update

Offers of cobalt from the Defense Logistics Agency (DLA) are now scheduled for the fourth Wednesday of each month.

The next offer will be on a sealed-bid sale of approximately 227 tons (500,000 pounds) of cobalt and is scheduled for February 25, 1998. For further information on DLA's cobalt sales program, please contact June Olmsted, DLA's contracting officer for cobalt, at (703) 767-5492.

Price update, in dollars per pound of electrolytic cobalt (Source—Platt's Metals Week):

<u>Week ending</u>	<u>Price range</u>
January 16	24.25-25.70
January 23	24.00-25.25
January 30	24.00-25.25
February 6	23.80-24.75

Monthly average

January
24.91

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Metal 2/	Oxide and other chemical compounds 3/	Scrap	Total
1996:				
January-December 4/	3,240	1,610	1,660	6,500
Year 5/	3,640	1,710	1,670	7,010
1997:				
January	303	140	163	606
February	287	134	165	587
March	274	133	171	578
April	304	132	173	610
May	297	128	174	599
June	270	126	174	570
July	270	119	169	557
August	295	113	173	580
September	288	130	172	590
October	297 r/	130	174	602 r/
November	275 r/	121	166	563 r/
December	259	141	171	571
January-December 4/	3,420	1,550	2,040	7,010

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes metal powder.

3/ Data may include other cobalt materials.

4/ Data based on monthly reports.

5/ Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE 1/

(Metric tons, contained cobalt)

End use	1996		1997	
	January- December 2/	Year 3/	December	January- December 2/
Steel:				
Stainless and heat resisting	38	38	3	38
Tool	95	95	12	113
Superalloys	2,910	3,220	260	3,390
Alloys (excludes steels and superalloys):				
Magnetic alloys	682	728	59	701
Welding materials (structural and hard-facing) 4/	268	284	28	341
Other alloys 5/	45	65	W	W
Cemented carbides 6/	721	722	57	725
Chemical and ceramic uses:				
Catalysts	638	652	49	600
Driers in paints or related usage	733	733	73	696
Ground coat frit	159	159	13	162
Pigments	W	191	W	W
Miscellaneous and unspecified 7/	211	119	16	248
Total	6,500	7,010	571	7,010

W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data based on monthly reports.

3/ Includes annual reports.

4/ Includes wear-resistant alloys.

5/ Includes nonferrous alloys.

6/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

7/ Includes feed or nutritive additive, full-alloy steel, glass decolorizer, mill products made from metal powder, and data indicated by the symbol "W."

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Industry 2/				U.S. Government 3/ metal
	Metal 4/	Oxide and other chemical compounds 5/	Scrap	Total	
1996:					
December 6/	284	272	181	737	18,700
Yearend 7/	305	275	182	762	18,700
1997:					
January	337	281	101	719	18,500
February	303	269	92	665	18,400
March	325	251	118	694	18,300
April	370	252	88	710	17,900
May	382	239	80	702	17,800
June	365	241	81	688	17,800
July	390	250	90	729	17,800
August	324	248	89	662	17,600
September	338	251	115	704	17,500
October	334 r/	252	110	697	17,400
November	336 r/	251 r/	113	699 r/	17,200
December 6/	355	249	114	717	17,100

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Stocks reported by cobalt processors and consumers.

3/ Data from Defense Logistics Agency. Includes material committed for sale pending shipment.

4/ Includes metal powder.

5/ Data may include other cobalt materials.

6/ Data based on monthly reports.

7/ Includes annual reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1996:								
November	481,000	\$22,300,000	61,100	\$2,640,000	90,700	\$911,000	550,000	6,210,000
December	400,000	19,400,000	64,100	2,400,000	155,000	1,340,000	494,000	6,710,000
January-December	5,760,000	327,000,000	824,000	36,200,000	1,260,000	14,800,000	6,710,000	XX
1997:								
January	629,000 7/	28,400,000 7/	85,900	3,080,000	182,000 7/	1,470,000 7/	746,000	746,000
February	567,000	24,300,000	56,900 7/	1,690,000 7/	157,000	1,540,000	649,000	1,400,000
March	524,000 7/	22,800,000 7/	72,200	3,250,000	65,000 7/	519,000 7/	594,000	1,990,000
April	770,000	32,900,000	104,000	4,190,000	203,000	1,910,000	899,000	2,890,000
May	634,000	31,100,000	63,200 7/	2,100,000 7/	250,000	2,270,000	746,000	3,640,000
June	584,000 7/	28,800,000 7/	124,000	4,760,000	139,000	1,470,000	711,000	4,350,000
July	547,000 7/	26,000,000 7/	120,000	4,760,000	265,000	2,680,000	704,000	5,050,000
August	508,000	23,400,000	139,000	4,890,000	128,000	1,330,000	643,000	5,690,000
September	647,000	28,500,000	141,000	5,090,000	138,000 7/	1,390,000 7/	785,000	6,480,000
October	300,000	14,200,000	84,500	3,050,000	137,000	1,380,000	397,000	6,870,000
November:								
Australia	--	--	--	--	--	--	--	3,600
Belgium	4,180	309,000	12,300	464,000	--	--	13,100	307,000
Brazil	16,500	783,000	--	--	--	--	16,500	131,000
Canada	55,400	2,740,000	--	--	815	20,600	55,700	849,000
China	--	--	--	--	--	--	--	1,500
Finland	18,500	903,000	14,400	519,000	95,900	919,000	54,300	1,350,000
France	2,540	233,000	2,200	159,000	--	--	4,130	72,300
Germany	--	--	150	13,200	--	--	108	64,500
India	--	--	--	--	--	--	--	4
Italy	--	--	10	4,110	--	--	7	36
Japan	--	--	--	--	--	--	--	23,600
Mexico	--	--	--	--	--	--	--	1,680
Morocco	--	--	--	--	--	--	--	33,700
Netherlands	--	--	--	--	--	--	--	8,640
Norway	172,000	8,390,000	--	--	--	--	172,000	1,850,000
Russia	111,000	4,420,000	5,100	144,000	--	--	115,000	833,000
South Africa	490	27,300	3	8,740	--	--	492	98,100
Spain	--	--	--	--	--	--	--	16,500
United Kingdom	6,990	367,000	45,400	1,870,000	1	2,100	39,700	292,000
Zaire	100,000	4,630,000	--	--	--	--	100,000	585,000
Zambia	126,000	5,780,000	--	--	--	--	126,000	1,050,000
Total	614,000	28,600,000	79,700	3,180,000	96,700	942,000	697,000	7,570,000

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.

3/ Includes cobalt sulfates, cobalt chlorides, cobalt carbonates, and cobalt acetates.

4/ Customs value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Other cobalt: matte, waste and scrap 2/		Wrought cobalt and cobalt articles	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
1996:						
November	17,500	\$946,000	20,400	\$552,000	9,680	\$714,000
December	3,560	207,000	55,300	2,270,000	15,300	1,100,000
January-December	60,500	3,790,000	566,000	11,700,000	178,000	11,500,000
1997:						
January	5,920	443,000	32,800 4/	1,070,000 4/	14,500	876,000
February	12,400	497,000	38,100 4/	1,280,000 4/	14,100	958,000
March	2,350	181,000	29,500 4/	1,170,000 4/	39,100	1,380,000
April	8,450	418,000	73,400	1,950,000	24,800	1,530,000
May	24,400	955,000	50,700 4/	1,320,000 4/	29,300	1,470,000
June	2,230	128,000	56,200 4/	1,840,000 4/	14,900	997,000
July	15,100	500,000	43,100 4/	1,260,000 4/	15,600	956,000
August	6,540 4/	293,000 4/	77,400 4/	3,860,000 4/	21,500	1,250,000
September	4,030	226,000	85,400 4/	1,680,000 4/	21,400	1,070,000
October	9,580	336,000	89,500 4/	3,790,000 4/	13,000	772,000
November:						
Australia	--	--	--	--	45	6,550
Belgium	6,090	198,000	11,800 4/	462,000 4/	43	6,200
Canada	290	55,700	31,400 4/	198,000 4/	358	66,300
Finland	--	--	35,700 4/	1,870,000 4/	--	--
France	--	--	5,080	92,600	693	41,000
Germany	--	--	6,580 4/	302,000 4/	1,140	62,300
Japan	4,170	315,000	15,300	253,000	2,410	98,300
Sweden	825	12,000	--	--	--	--
United Kingdom	--	--	6,720	36,200	4,380	274,000
Total	11,400	582,000	113,000	3,210,000	9,080	555,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other intermediate products of cobalt metallurgy; may include other cobalt-bearing materials from which cobalt is extracted, or from which cobalt-containing chemical compounds are manufactured.

3/ Customs value.

4/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS 1/

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1996:								
November	84,000	\$3,510,000	27,400	\$777,000	78,100	\$316,000	122,000	1,490,000
December	118,000	3,930,000	54,400	1,440,000	112,000	678,000	184,000	1,670,000
January-December	1,320,000	66,100,000	346,000	10,200,000	446,000	4,050,000	1,670,000	XX
1997:								
January	60,800	2,350,000	30,300	979,000	34,100 7/	149,000 7/	90,700	90,700
February	101,000	2,480,000	48,100 7/	1,160,000 7/	65,500 7/	234,000 7/	152,000	242,000
March	82,000	3,990,000	50,100	1,530,000	18,500	253,000	123,000	365,000
April	143,000	5,760,000	93,100 7/	2,140,000 7/	5,430	74,100	211,000	576,000
May	77,100	3,990,000	35,600 7/	802,000 7/	65,800	428,000	118,000	695,000
June	82,900	3,760,000	56,200 7/	1,660,000 7/	75,000 7/	246,000 7/	141,000	836,000
July	55,200	2,710,000	68,000 7/	1,610,000 7/	102,000 7/	520,000 7/	129,000	965,000
August	81,600	3,290,000	32,600 7/	595,000 7/	94,200	442,000	128,000	1,090,000
September	62,900	2,010,000	42,500	1,060,000	177,000	1,180,000	136,000	1,230,000
October	53,700	2,930,000	36,800	1,190,000	59,500	588,000	94,600	1,320,000
November	102,000	2,560,000	73,800 7/	1,010,000 7/	20,100	191,000	160,000	1,480,000

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include other intermediate products of cobalt metallurgy, and unwrought cobalt alloys.

3/ Cobalt acetates and cobalt chlorides.

4/ Free alongside ship (f.a.s.) value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES 1/

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value 2/	Quantity	Value 2/
1996:				
November	108,000	\$2,610,000	8,790	\$370,000
December	88,900	4,080,000	--	--
January-December	532,000	23,600,000	154,000	4,560,000
1997:				
January	44,300	3,020,000	24,600 3/	1,000,000 3/
February	20,900	1,420,000	80,500 3/	750,000 3/
March	68,200	3,720,000	12,200 3/	145,000 3/
April	66,100	2,590,000	300 3/	7,390 3/
May	187,000	8,410,000	2,510 3/	56,500 3/
June	76,800	2,780,000	9,400 3/	651,000 3/
July	29,300	1,230,000	20,300 3/	716,000 3/
August	36,400	2,700,000	285 3/	33,500 3/
September	23,500	1,220,000	32,700 3/	282,000 3/
October	131,000	5,080,000	9,470 3/	250,000 3/
November	44,700	2,690,000	7,940 3/	109,000 3/

1/ Data are rounded to three significant digits.

2/ Free alongside ship (f.a.s.) value.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.